

positum haud ita pridem adeptus, pecuniae summam magnam non inertem reliquisti, sed Matris almae in manus totam collocasti, et Matris eiusdem filiis omnibus liberalitatis exemplar conspicuum praebuisti. Cancellarii autem ad officium hodie admissus, sine dubio iura et privilegia nostra omnia in tutelam tuam tradita, si quando opus fuerit, fortiter defendes. Tuo, ut speramus, sub patrocinio, non scientiarum modo studia florebut, sed etiam, praemiis a Cancellario ipso iuventuti Academicæ quotannis propositis, et iuris et litterarum Græcarum, Latinarum, Anglicarum, amor, sicut antea, accendetur. Dum gratias tibi hodie omnes ex animo agimus, nihil amplius restat quam ut tibi, vir honoratissime, Cancellarii in munere magno feliciter obeundo, annos prosperos quam plurimos exoptemus.

In his reply the Chancellor expressed his sense of the honour the Senate had done him in electing him to the high office, and mentioned his close connection with Cambridge, "the nursing home of Herschel, Airy, Stokes, Kelvin, and of Adams," both as student and as professor. Lord Rayleigh also recalled the fact that he had served, under the Act of 1877, on the Commission which framed the new statutes for the University and colleges; in fact, he and the Bishop of Bristol, who acted as secretary, are the sole survivors of that Commission. He spoke of the reforms which had been then effected, and referred to the view that they may still need supplementing, and he dwelt for a moment on the fact that the efficiency of the University would be promoted by the command of ample resources. The Chancellor paid a tribute to the late Duke of Devonshire, whose quiet and persistent interest in the University manifested itself in many ways. Indeed, his unremitting efforts to advance its welfare are probably only recognised by those who were brought into contact with him, both as head of the University and as president of the Cambridge Association.

In choosing Lord Rayleigh as its Chancellor, Cambridge has chosen one of the most distinguished men of science of the age, and one whom we feel sure will devote his energies to the promotion of the good of that ancient institution. In these days chancellors of universities have a good deal more to do than even the members of the Senate usually recognise. Apart from occasional appearances at ceremonies there is much and continuous work to be done; the interpretation of the statutes rests with the Chancellor, and in many ways he represents the University in the larger world. The new Chancellor of Oxford has shown what can be done even in a few months of wise activity in re-awakening interest in the older universities, and in defining and formulating a definite policy of expansion.

PIERRE JACQUES ANTOINE BÉCHAMP.

BY the death of Béchamp, on April 15, at the ripe age of ninety-two, France lost the *doyen* of her chemists, and the world of science is the poorer by the disappearance of one more link connecting the new chemistry with the old. The nature of that link will be evident from the circumstance that Béchamp was born in the same year as Gerhardt, and that the period of his greatest scientific activity was contemporaneous with that of Laurent and Gerhardt.

Béchamp was born at Bassing, near Dieuze (Meurthe), on October 16, 1816. He lost his parents when he was eleven years of age, and was taken charge of by an uncle, who had settled in Roumania, and with whom he remained until 1834. In his seventeenth year he was apprenticed to a pharmacist at Strasburg. Pharmacy at that period constituted the main avenue to scientific chemistry, and in tra-

versing it Béchamp simply followed in the footsteps of a dozen of his predecessors, some of whom, like Scheele, Vauquelin, Dumas, are among the most renowned of chemical investigators. At Strasburg, at that period, were Gerhardt and Wurtz, and, as in their case, Béchamp was soon attracted to the study of the rapidly extending branch of organic chemistry, and made ample use of the opportunities which his master's laboratory afforded to prosecute his inquiries. At that time, even in England, pharmacy was a profession, and the pharmacist was a practical chemist, abreast of the science of his time, whose laboratory was of more importance to him than his shop.

In 1851 Béchamp became attached to the School of Pharmacy at Strasburg, and thenceforth devoted himself to an academic career. Pasteur was then a professor of the Faculty of Science of Strasburg, and to him Béchamp presented a thesis on the newly discovered gun-cotton, which gained for him his doctorate of science in 1853. In 1856, at the age of forty, he became a doctor of medicine, and in the following year was appointed to the chair of medical chemistry in the Faculty of Medicine at Montpellier.

Béchamp was a prolific contributor to the literature of chemistry. The Royal Society's Catalogue of Scientific Papers enumerates upwards of 140 papers which proceeded from his pen down to the year 1873. As he continued his activity to the last, the total number cannot fall short of a couple of hundred. In addition he published a number of scientific treatises in book-form, mainly relating to chemical biology.

Béchamp's work ranged over nearly every department of chemistry. Inorganic chemistry appears, however, to have had little attraction for him, and his name is associated with not more than a dozen communications in that branch of inquiry.

It is mainly in connection with the early history of what is called coal-tar chemistry, and more especially in connection with the fields of investigation with which the name of Pasteur is preeminently associated, that Béchamp's services will be recalled. The method of manufacturing aniline ultimately made use of by Perkin in England, and by the brothers Renard in France, was due to Béchamp. It consisted in the action of ferrous acetate on nitrobenzene, and appears to have been first made known in 1854. He also contributed to the French Academy in 1860-61 communications on fuchsine and allied colouring matters.

But it was to the domain of biological chemistry that Béchamp's energies were principally directed, and he took an active part in the inquiries and controversies which ultimately led to the triumph of Pasteur and his immediate followers. Although much of Béchamp's work on fermentation, on the production of moulds, on the silk-worm disease, and on zymases ran parallel with Pasteur's inquiries, his interpretation of the phenomena was generally opposed to that of Pasteur, and the two investigators were frequently in acute controversy on these subjects. Béchamp's fame has probably suffered in consequence. We must, however, do him the justice to admit that his main contention, that unorganised ferments play a larger and more important part in the phenomena of metabolism than the immediate followers of Pasteur were willing to concede, is intrinsically sound. Béchamp developed his views into a general theory, which he published in 1866, whilst at Montpellier, in a work entitled "*Microzymas et Microbes. Origine des ferments.*" This he supplemented some years later by a further work, "*Les Microzymas dans leurs rapports avec l'hétérogénie, l'histogénie, la physiologie et la pathologie.*" Paris, 1883. Whatever may be the ultimate fate of his theoretical conceptions, his experimental work on blood, fibrin, milk, proteins, and his

position in regard to the great and fruitful controversies of half a century ago out of which modern bacteriological doctrine has sprung, will ensure him an honourable place among the founders of biological chemistry.

On the creation of the Faculty of Medicine at Lille, Béchamp accepted the offer of a chair, and he remained there, as Dean, until his resignation in 1887, when he retired to Paris, and, accepting the hospitality of Friedel's laboratory in the rue Michelet, continued his biological inquiries, occupying himself to the end in searching for support for the comprehensive generalisation of organic change on which his fame will ultimately rest.

NOTES.

THE Croonian lecture of the Royal Society will be delivered on Thursday next, May 14, by Prof. G. Retzius, upon the subject of "The Structure of the Central Nervous System of the Higher and Lower Animals."

THE President of the Board of Trade has appointed a committee to prepare a programme for the consideration of the delegates to the International Conference on Electrical Units and Standards to be held in London in the ensuing autumn, and to make arrangements for the reception and assembly of the delegates attending the conference. The members of the committee are Mr. G. R. Askwith, K.C., Sir John Gavey, C.B., Dr. R. T. Glazebrook, F.R.S., Major P. A. MacMahon, F.R.S., Major W. A. J. O'Meara, R.E., C.M.G., and Mr. A. P. Trotter. Mr. M. J. Collins, of the Board of Trade, will act as secretary to the committee.

M. BIGOURDAN read a paper at the meeting of the Paris Academy of Sciences on April 27 on the use of wireless telegraphy for weather forecasting. He pointed out that our weather is associated with the passage of atmospheric depressions arriving from the west, and generally from parts of the Atlantic situated north of 35° N. latitude, and it is estimated that about one-half of these depressions come from North America, whilst the others form in the open Atlantic. To forecast the arrival of depressions it is necessary to have observations from the open ocean. Floating observatories have been suggested, coupled with the continents on either side of the Atlantic. M. Bigourdan suggests that steamships should communicate, to the responsible authorities, their position and meteorological observations by wireless telegraphy, and by this means modify and improve our conditions for weather forecasting to the benefit of the general community. For some time past our English Meteorological Office has published in its Daily Weather Report wireless telegrams from ships of His Majesty's Navy.

THE sixteenth Congress of German Electrotechnical Engineers will be held at Erfurt on June 11-14.

THE Entomological Society will hold a conversazione on Friday, May 15, in the rooms of the Civil Service Commission, Burlington Gardens.

THE Rumford medal of the American Academy of Arts and Sciences has been awarded to Dr. E. G. Acheson, of Niagara Falls, for his work with the electric furnace.

THE Chemical Society of Rome, the Chemical Society of Milan, and the Association of Industrial Chemists of Turin will, from January 1, 1909, be united under the name of the Italian Chemical Society.

PROF. W. H. WALKER, professor of technical chemistry at the Massachusetts Institute of Technology, has been

awarded the Nichols medal by the New York Section of the American Chemical Society.

MESSAGES from Catania report that dense clouds of vapour issued from the central crater of Mount Etna on April 29. The crater of 1852 in the Valle del Bove was also in eruption. On May 2 the volcano was again in active eruption, and a stream of lava was slowly advancing.

A CONVERSAZIONE will be given by the Medical Society of London on Monday, May 18, in the rooms of the society, Chandos Street, Cavendish Square. After the reception by the president, the Fothergillian medal will be presented to Sir Almroth Wright, F.R.S. An oration will be given by Mr. T. Clinton Dent on the subject of the after results of injuries.

ON Tuesday next, May 12, Prof. F. T. Trouton will begin a course of two lectures at the Royal Institution on (1) "Why Light is believed to be a Vibration"; (2) "What it is which Vibrates." The Friday evening discourse on May 15 will be delivered by Dr. H. T. Bulstrode on "The Past and Future of Tuberculosis," and on May 22 by Prof. J. C. Kapteyn on "Recent Researches in the Structure of the Universe."

At the Institution of Electrical Engineers on April 30 Prof. Silvanus P. Thompson, F.R.S., gave the first Kelvin memorial lecture, his subject being "The Life and Work of Lord Kelvin." Before the lecture was delivered Mr. H. F. Parshall presented the institution with a bust of Benjamin Franklin on behalf of the American Institute of Electrical Engineers as a souvenir of their visit to England about a year and a half ago. The gift was acknowledged by Lieut.-Colonel R. E. Crompton, the president of the institution.

THE sixteenth International Congress of Americanists will be held under the presidency of Baron Weckbecker at the University of Vienna on September 9-14. The object of the congress is to promote scientific inquiries into the history of both Americas and of their inhabitants. Communications may be oral or written, and may be in one of several languages, English included. For further information application should be made to Herr Franz Heger, Vienna (Austria), I. Burgring 7. A programme will be issued early in the summer.

PROF. ANGELO MOSSO, of Turin, writes to remind us of the fact, to which attention was directed in an article by the late Sir Michael Foster in NATURE of March 9, 1905 (vol. lxxi, p. 445), that the Royal Society has the right to nominate two investigators to occupy tables in the Monte Rosa and Col D'Olen international laboratories. The tables are available for the study of botany, bacteriology, zoology, physiology, terrestrial physics, and meteorology. The two tables at the disposal of the Royal Society are, it will be remembered, due to the generosity of Dr. Ludwig Mond, F.R.S.

At the annual general meeting of the Institution of Civil Engineers on April 28, Mr. J. C. Inglis was elected president of the institution. The council has made the following awards for papers read and discussed during the past session:—a Telford gold medal to Mr. W. Barclay Parsons (New York); a Watt gold medal to Sir Whately Eliot; George Stephenson gold medals to Sir John Ottley, K.C.I.E., Dr. A. W. Brightmore, and Messrs. J. S. Wilson and W. Gore; Telford premiums to Messrs. F. W. Davis (Darlington), C. R. S. Kirkpatrick (Newcastle-on-Tyne), Hugh T. Ker (Glasgow), G. H. Scott, R. R. Gales (India), and S. H. Ellis.